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ABSTRACT

The Montgomery County Public School (MCPS) system has created a procedure for guiding the architectural design and construction of elementary school buildings that document staff representatives can use when reviewing drawings and specifications for the facility. The document is divided into three sections: the first lists the type of spaces and square footage required; the second describes the general design, location, and specific requirements for each type of instructional space in accordance with MCPS standards; and the third identifies the unique program needs of the school's students and staff where the planning advisory committee has recommended modifications or additions to the basic program requirements. (GR)

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ED 428 518

ELEMENTARY EDUCATIONAL SPECIFICATIONS FORMAT
MONTGOMERY COUNTY PUBLIC SCHOOLS

December 1993

Paul Vance
Superintendent of Schools

EF 005 261

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INTRODUCTION

This document describes the facilities which are needed for the _____ Elementary School educational program. The descriptions will provide the architect with important guidelines and will be used by staff representatives when reviewing drawings and specifications for the facility.

It is divided into three sections. The first section lists the type of spaces and square footage required when the _____ project is complete. The second section describes the general design, location and specific requirements for each type of space in accordance with MCPS standards. A third section identifies the unique program needs of the _____ Elementary School students and staff where the planning advisory committee has recommended modifications or additions to the basic program requirements.

The building should be designed for compliance with the Americans with Disabilities Act (ADA), Accessibility Guidelines for Building and Facilities (July 1991). These standards may be modified by "Recommendations for Accessibility to Serve Physically Handicapped Children in Elementary School," U.S. Department of Education, 1986.

Special consideration must be given to energy conservation including total life-cycle costs. The current Department of General Service (DGS) requirements will be applied as design criteria. Life-cycle cost accounting in accordance with DGS criteria is required. A statement on energy conservation must be a part of the preliminary plans submission. Additional details on energy conservation will be provided under separate cover.

The architect must comply with section 5-103 of the Maryland Natural Resources Article in consultation with the Maryland Forest Service designating, if suitable, the area on site and type of reforestation or validating the need for off-site reforestation to comply with current county regulations.

The architect is expected to become thoroughly familiar with Maryland and Montgomery County fire safety, life safety, and health code regulations and to follow applicable rules of the State Interagency Committee for School Construction.

The architect is to show the location for possible future installation of two day care units as well as a location for portable classrooms, should they be required in the future. Electrical connections should be stubbed off in the location where portables would be sited. Installation of wiring and plumbing connectors should be considered as part of this project, as should design of appropriate play areas.

The architect is to show the location for a future four-classroom addition.

SUMMARY OF SPACE REQUIREMENTS

When this project is complete, the following spaces are to be provided:

FACILITY	NET SQUARE FEET
Prekindergarten	
1,050 1 - Classroom at 1050 sq. ft.	1,300
250 1 - Total storage at 250 sq. ft.	
1,300	
Kindergarten	5,200
4,200 4 - Classrooms at 1050 sq. ft.	
1,000 4 - Total storage at 250 sq. ft.	
5,200	
Classrooms	19,800
16,500 22 - Classrooms at 750 sq. ft.	
3,300 22 - Total storage at 150 sq. ft. (50 sf. in closet)	
19,800	
Special Education	4,600
3,200 4 - Classrooms at 800 sq. ft.	
400 4 - Total storage at 100 sq. ft. (50 sf in closet)	
500 - Resource Room	
250 - Speech/Language Room	
250 - Therapy/Support Room	
4,600	
Testing/Conference Room	150
Math Assessment/Records Center	250
Reading/Language Arts Room (includes 150 book storage)	650
Support Staff Offices - Offices at 150 sq. ft.	300
Small Group Instruction Room (for such things as ESOL)	400
Art	1,050
900 - Classroom	
150 - Total storage	
1,050	

Music	1,050
900 - Classroom	
150 - Total storage	
1,050	
Dual Purpose Room	1,000
Instrumental Music Room	400
Media Center	3,500
2,100 - Resource/Circulation	
400 - Materials Preparation	
550 - Media Storage	
200 - Textbook Storage	
200 - Control Room and Storage	
50 - Head End Equipment Closet	
3,500	
Computer Laboratory with Storage	1,000
Physical Education	6,700
5,950 - Gymnasium	
150 - Office	
450 - Storage	
150 - Outside Storage	
6,700	
Multipurpose Room/Kitchen	4,850
3,000 - Multipurpose Room	
200 - Chair Storage	
200 - Table Storage	
450 - Stage	
1000 - Kitchen	
4,850	
Administration	2,250
500 - General Office	
350 - Workroom	
450 - Health Room	
250 - Principal's Office	
300 - Conference	
100 - Record Room	
150 - Assistant Principal	
50 - Telephone Room	
100 - Storage	
2,250	

Counselor's Office	250
Staff Lounge	700
Building Services	300
Compactor Room	150
General Storage	900
750 - 3 storage at 250 sq. ft. each (plus 100 shown under administration)	
150 - Outdoor Storage	
900	
TOTAL NET SQ. FT.	56,750

GENERAL PLANNING CONSIDERATIONS

In the general planning of this building, special consideration is to be given to the following comments and instructions.

High quality materials are to be used in construction.

The building is to be accessible to the disabled within the meaning of the Americans with Disabilities Act of 1990 and to conform to all relevant requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board. To meet the needs of visually handicapped individuals, ADAAG paragraph 4.30.4, raised and Brailled Characters and Pictorial Symbol Signs, is extended to require 6-inch high, 5/8 inch thick letters and numerals, black matte finish on a light non-glare background. Refer to the Division of Construction signage standards. All doors must have levered handles.

The facility is to reflect an appealing visual, sonic, and thermal environment and is to be properly furnished and equipped. Well-chosen colors and textures are to be used. Lighting must meet current standards and provide adequate levels. Skylights are not to be utilized.

Facilities must be adaptable to accommodate rapid development in high technology and its equipment. Educational program and organization in this field are dynamic. Students will have access to computers and word processors to perform data processing activities; and changes may be made as to where and when these activities will occur. Space and power supply must be flexible to meet these changing needs.

The design of the building and grounds must provide for a secure environment for students and staff. Isolated areas should be minimized and natural surveillance encouraged by eliminating visual barriers. Plans will be reviewed by the Montgomery County Police Department.

An MCPS-designed alarm system will provide security for this facility. The architect will provide for this system in consultation with the Division of Construction staff. The computer lab should be located within the facility to preclude easy access by windows or doors, if possible.

A two-story building or addition may be considered.

The first impression of a building is important. The main entrance to the school should have a clear and inviting identity, and the entrance area should be designed and landscaped to emphasize its importance. A covered walkway from the bus loading area to the front door is desirable. The design of the entry foyer needs to convey a feeling of warmth and welcome. The inclusion of a lighted showcase in which children's work

can be displayed is recommended.

The architect must design all athletic/physical education facilities to reflect equitable facilities for boys and girls based on Title IX requirements.

Building code requirements call for less than ten percent of interior corridor space to be used for hall bulletin boards. To the extent that hall display is provided, tack strips are to be used.

Students should have easy access to the play areas from the classrooms and multipurpose room. Play areas are to be protected from any vehicular traffic. Unobstructed supervision of play areas from a central area should be possible.

The school is to be air-conditioned except for the gymnasium. Transmission of heat through windows into various portions of the plant is to be considered in relation to heating and ventilating. Windows must be operable.

Zoning the plant for heating and air-conditioning should be related to after-hours use of various areas such as offices, gymnasium, food service, and the instructional materials center. Appropriate location of corridor gates and toilets is necessary.

Noise and distracting sounds are to be minimized. In areas such as the cafeteria, which may be used for meetings and adult education, the sound of operating fans for ventilation should not interfere with instruction.

Sufficient handicapped accessible water coolers, bathrooms and phones for students and adults should be provided and accessible. An adult restroom should be provided at the minimum rate of one per eight classrooms. Adult restrooms may be unisex.

Spaces which serve no real educational function, such as corridors, should be limited while at the same time assuring a smooth flow of pupil traffic to and from the instructional media center, multipurpose room, specialized centers, and support rooms.

Classrooms and support spaces should be carpeted where traffic flow, sink, and door areas will not create additional soil buildup.

All doors into classrooms, offices and support areas must have a clear glass window. Doors should be light enough in weight that young students can open them. Doors should be provided between classrooms whenever possible.

Classrooms and support spaces are to be cable ready and must be tied into a building-wide computer network as specified in the "Design Criteria for Elementary School Instructional Computers" available through the Division of Construction. Results of the Technology Group Planning Report are to be followed.

Casework of an appropriate height to hold a TV and VCR on top is to be installed in every classroom space.

The shape of the classroom and the design of built-in features and storage areas should provide optimum net classroom floor area. Elongated rooms and features which protrude into or cut up net floor area are to be avoided.

Adjustable shelving is to be provided in each storage closet.

MCPS program coordinators will review plans and elevations through the Division of Construction.

DESCRIPTION OF FACILITIES

CLASSROOMS

The following is an approach to the design of new and modernized schools. Square-foot allocations shown should be considered the standard to be followed, although minor deviations are allowed. At least one classroom in every wing, or organizational level should be designed to accommodate mainstreaming of severely physically handicapped students.

PREKINDERGARTEN ROOM - 1 needed

Spatial Needs - 1300 square feet of classroom floor area which includes a 100 square foot walk-in storage closet/teachers wardrobe area.

General Design and Location

1. Each prekindergarten room must have an open classroom area with moveable furniture to allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach, and listening centers.

2. Each prekindergarten room must have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building, to the bus loading area, and to a parent drop-off area. Interior doors to other classrooms are favorable.

3. The computers should not be located next to a chalkboard where chalk dust or magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS Division of Construction.

4. A separate and fenced outdoor play area should be adjacent and may be part of the kindergarten area.

5. Each room must have a toilet room which is accessible from within the room and easily accessible from outside.

Specific Requirements:

1. A built-in pupil wardrobe area located adjacent to the entrance must provide 45 individual compartments to store pupils' belongings. Coats and outer

garments are to be hung on 3- to 4-inch hooks properly spaced and with a nonhazardous angle. Wooden coat "pegs" or closet rods with hangers are not acceptable.

2. In each room, some storage is needed to accommodate 24- by 36-inch paper and to store kindergarten blocks.

3. Ten feet of magnetic chalkboard should be installed at eye-level height for small children, with tack stripping along walls for display of student work. A maximum of tackboard should cover the remaining wall space.

4. A 24 inch high sink with levered on/off knobs and drinking fountain must be provided, with cabinets above and below.

5. The toilet room will contain a sink with child-height mirror, and soap and towel dispensers accessible to small children. The light switch should automatically turn on the vent fan.

6. Electrical outlets and space relations on one wall must be adequate for 5 microcomputer systems, each mounted on a 2-foot by 3-foot cart requiring an outlet. Wiring for the 5 computers should be a dedicated number 12 wire/20 amps. Five grounded outlets on this wire should not be used for any other purpose and should be identified with colored outlet covers. In addition to outlets for microcomputers, eight duplex outlets are to be provided per classroom (where feasible, quadplex outlets may be utilized. Safety covers should be provided for all outlets.

7. Each classroom should be equipped with two inch audio-visual blinds and a retractable projection screen. The projection screen should be mounted so that it does not block view of the clock. Battery operated clocks will be provided by MCPS.

8. A full length mirror with door to cover mirrored area when not in use should be installed.

9. The architect should identify space for a 12 cubic foot refrigerator, and provide an appropriate outlet.

10. A 50 square foot storage shed for large play equipment (3-4 feet high) should be constructed within the kindergarten play yard.

KINDERGARTEN ROOM

Spatial Needs - 1300 square feet of classroom floor area which includes a 100 square foot walk-in storage closet/teachers wardrobe area.

General Design and Location:

1. Each kindergarten room must have an open classroom area with moveable furniture to allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach, including private carrels and listening centers.

2. Each kindergarten room must have an outside door or be directly accessible to the outside and convenient to the main entrance of the school building, to the bus loading area, and to a parent drop-off area. There should be interconnecting interior doors between all kindergarten rooms.

3. The computers should not be located next to a chalkboard where chalk dust or magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS Division of Construction.

4. A separate and fenced outdoor play area should be adjacent.

5. Each room must have a toilet room which is accessible from within the room and easily accessible from outside. At least one kindergarten must have a handicapped accessible bathroom.

Specific Requirements:

1. A built-in pupil wardrobe area must provide 45 individual compartments to store pupils' belongings. Coats and outer garments are to be hung on 3- to 4-inch hooks properly spaced and with a nonhazardous angle. Wooden coat "pegs" or closet rods with hangers are not acceptable.

2. In each room, some storage is needed to accommodate 24- by 36-inch paper and to store kindergarten blocks.

3. Thirty feet of tackboard and 10 feet of magnetic chalkboard should be installed at eye-level height for small children, with tack stripping along walls for display of student work.

4. A sink with drinking fountain must be provided, with cabinets above and below. The sink area is to include a moveable water tray for measurement/volume activities.

5. The toilet room will contain a sink with child-height mirror, and soap and towel dispensers accessible to small children.

6. Electrical outlets and space relations on one wall must be adequate for 5 microcomputer systems, each mounted on a 2-foot by 3-foot cart requiring an outlet. Wiring for the 5 computers should be a dedicated number 12 wire/20 amps. Five grounded outlets on this wire should not be used for any other purpose and should be identified with colored outlet covers. In addition to outlets for microcomputers, 8 duplex outlets are to be provided per classroom (where feasible, 8 quadplex outlets may be utilized).

7. Each classroom should be equipped with two inch audio-visual blinds and a wall mounted retractable projection screen. The projection screen should be mounted so that it does not block view of the clock. Battery operated clocks will be provided by MCPS.

8. A full length mirror should be installed.

9. Appropriate electrical outlets and space are to be provided for future placement of a full-sized refrigerator near the wet area.

STANDARD CLASSROOM

Spatial Needs - 900 square feet of classroom floor area which includes a 50 square foot walk- in storage closet/teachers wardrobe area.

General Design and Location:

1. Each room must have an open classroom area with moveable furniture to allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach, including private carrels and listening centers.

2. The computers should not be located next to a chalkboard where chalk dust or magnets might damage the hardware and software. Glare from the windows on the computer screens should also be eliminated as much as possible. Security for the computers should be planned in consultation with the MCPS Division of Construction.

3. All classrooms are to include the following specific requirements related to handicapped accessibility:

   a. Classroom should be able to accommodate orthopedically handicapped adaptive furniture.

   b. Doorways are to be angled or walls curved so that there is not an abrupt right angle for wheelchairs to get around and to allow enough room for the door to open out of the way.

c. Classroom is to have a handicapped accessible sink and bubbler, 28 inches from the floor. The sink is to have a drain area so water does not accumulate on the countertop. Levered on/off knobs on the right or left (not in the back of the sink) and a "crane-necked" faucet are to be provided.

Specific Requirements:

1. Each standard classroom should be equipped with two inch audio-visual window blinds and a wall mounted retractable projection screen. The projection screen should be mounted so that it does not block view of the clock. Battery operated clocks will be provided by MCPS.

2. Each room must have a 28 inch high sink with hot and cold water, a work area and drinking fountain. Sink is to have levered on/off faucets.

3. Approximately 30 to 35 linear feet of magnetic chalkboard and 20 to 24 linear feet of tackboard, both with tack strips and map rails above, must be installed in each classroom. Tackstrip is needed on all available walls. Chalkboards should be located so as to reduce glare. Some chalkboards may need lines and coordinate grids.

4. Thirty built-in individual compartments in the wardrobe area for storing pupil lunches and personal property are required. Each cubby must contain a volume of two cubic feet. Locate 3- to 4-inch hooks properly spaced and with a nonhazardous angle, sufficient for winter coats, back packs, and outer garments. Coat "pegs" and closet rods with hangers are not acceptable.

5. Electrical outlets and space relations on one wall must be adequate for 5 microcomputer systems, each mounted on a 2-foot by 3-foot cart requiring an outlet. In addition, wiring for the 5 computers should be a dedicated number 12 wire/20 amps. Five grounded outlets on this wire should not be used for any other purpose and should be identified with colored outlet covers. In addition to outlets for microcomputers, 8 duplex outlets are to be provided per classroom (where feasible, quadplex outlets may be utilized).

6. A storage area is needed to hold at least two science kits (approximate 24" x 48" x 18" each) and one math kit in each classroom.

7. General storage space must be built in and must accommodate 24- by 36-inch paper and a 4-drawer file cabinet. Each classroom must include 48 linear feet of built-in adjustable shelving.

8. A lockable teacher's wardrobe must be provided.

9. Designated shelf space, not near a window, for an aquarium/terrarium with nearby electrical outlet, is desirable.

10. An area for TV and VCR is to be designed into each classroom on or above casework. The TV should be located so that students can view from their desks.

SPECIAL AND ALTERNATIVE EDUCATION FACILITIES

SPECIAL EDUCATiON CLASSROOM

Spatial Needs - 900 square feet of classroom floor area which includes a 50 square foot walk-in storage closet.

General Design and Location:

1. Special education classrooms should be located with similar grade classrooms in the building so that integration with regular students at the primary and at the upper grade levels occurs naturally.

2. An open classroom area with movable furniture units is needed to allow flexibility in creation of activity areas and to provide for individualized instruction through arrangement of the "centers" approach, including private carrels, listening centers, and sufficient electrical outlets for AV equipment and five to eight microcomputers (see standard classroom).

3. Primary level rooms are to contain a toilet room. If two rooms are provided, the other room may contain a quiet/conference room of not more than 50 square feet with a large window and door to the classroom.

4. 30 cubbies are to be provided.

Specific Requirements:

This specific requirement are the same as the requirements for standard classrooms requirements, beginning on page 10, numbers one through nine.

SPECIAL EDUCATION SUPPORT ROOMS

The following rooms will provide for individual and small-group instruction as needed for the entire student body.

Spatial Need	Square Feet

Special Education Resource Room	500
Speech/Language Room	250
Therapy/Support Room	250

General Design and Location:

1. These rooms should be centrally located, with easy access to an office/conference area and to toilet rooms which can accommodate the physically handicapped. The therapy/support room should be near the multipurpose room.

2. The rooms must be well ventilated.

3. The school may choose to combine the speech/language room and the therapy/support room for a combined space of 500 square foot.

Specific Requirements:

1. Each room must have chalkboard, tackboard, open and closed lockable storage, open shelving, counter space, closed storage, and a lockable teacher wardrobe. Room for a teacher's desk, lockable file cabinet, and assorted-sized furniture with adjustable legs should be provided.

2. Sufficient electrical outlets are to be provided. Where feasible quadplex outlets may be utilized.

3. All rooms must be carpeted. (Therapy room: one half carpet, one half tile).

4. The speech room must be acoustically treated.

5. The resource room must contain a sink with counter space

6. The therapy support room requires lockable storage with sufficient area to house large gross motor equipment (minimum of 35 square feet).

INSTRUCTIONAL SUPPORT ROOMS

The following rooms provide for individual and small group instruction by various school-based and traveling staff.

Spatial Needs	Square Feet

Testing Conference Room	150
Math Assessment and Records Room	250
Reading/Language Arts Room (includes total 150 sq. ft. storage)	650
Support Staff Offices (two @ 150)	300
Small Group Instruction (for such things as ESOL)	400

General Design and Location:

Testing/Conference Room

1. Individual students or small groups of students are tested by school, area, and/or central office staff. Typical testing includes psychological, diagnostic, vision/hearing, gifted, makeup testing for required standardized tests, etc.

2. This room would be used also to accommodate post-test conferences with teachers and/or parents.

Math Assessment and Records Center:

1. This room is required for an aide who conducts ISM assessments, updates individual student math records, and provides remediation of students' skills in functional math.

2. This room houses one microcomputer with printer and card reader and must be lockable and secure.

Reading/Language Arts Room:

1. Students receive individual and small group instruction in reading on a regular basis for one or two periods a day.

2. This room is to include 150 square feet of storage.

3. This room is used to provide remediation and reinforcement of skills and concepts in writing, reading, spelling, and mechanics of English to individuals and small groups in a quiet setting free from distraction.

4. This room would be used also for constructing support materials for the reading/language arts program.

Small Group Instruction:

1. Students receive small group instruction in English as a second language for one or two periods a day.

2. In some schools this room may be shared with other itinerant staff.

Support Staff Offices:

1. Office space is needed for permanent as well as itinerant support staff (curriculum coordinator, team coordinator, social worker, psychologist, auditory and vision specialists, and psychiatrist).

Specific Requirements:

1. A mirror, bookcases, chalkboard, tackboard, shelving, and lockable teacher storage are to be installed in each room.

2. The testing/conference room and the ESOL room must be acoustically treated.

3. The reading/language arts room needs large flat surfaces and a sink.

4. Sufficient electrical outlets are to be provided (where feasible, quadplexes may be utilized).

SPECIALIZED CENTERS

ART ROOM

The art room is to provide space for teaching and creating art, displaying student work and educational aids, and storing supplies and materials. The art room must be uncarpeted.

Spatial Needs

1050 square feet of classroom area which includes a 150 square foot walk-in storage closet

General Design and Location:

1. The design of all work, display, and storage areas should create an environment that is functional and easy to clean.

2. Lighting should be both natural and artificial and conducive to close work.

3. A door to the outside is desirable.

4. Space and electrical outlets for two kilns should be in the storeroom if possible. The alternate area may be in the art room opposite the teaching wall and near the windows.

5. Eight duplex electrical outlets are to be provided (where feasible quadplex outlets may be utilized).

Specific Requirements:

1. On window wall:

    a. Shelves under windows

    b. Tackboard above windows

2. On teaching wall:

    a. Two 3-foot wide, 7-foot tall shelf sections for storage of unfinished work

    b. Eight feet of chalkboard

    c. Eight-foot section of 6 foot tall tackboard with 2-foot tall tackboard above 4 foot tall chalkboard; tack and chalkboards mounted 2 to 4 inches above low shelving

    d. Twelve-inch deep, 24 inch high, shelving under center 16 feet of tackboard and chalkboard

    e. Wall mounted projection screen

3. On wall near entrance:

    a. Two 30 inch high student sinks, one located on an island (Island to be no longer than 3 feet) should be along this wall. Sinks should be located so faucets are accessible to students. Faucets should be positioned to prevent splashes onto floor. Sinks and sink area should also include:

        (1) Plaster traps

        (2) Closed cabinets below and above

        (3) Conveniently located towel dispensers

(4) At least 9 feet of counter space (plus at least 1 foot of counter space on both sides of the sink)

(5) Hot and cold water faucets with bubbler

b. A 5- to 7-foot open space is needed for drying rack(s) along one wall near sinks and entrance to room

c. Approximately 30 smock hooks in 3 feet of staggered tiers, beginning 2 feet from floor, spaced 4 inches apart, up to 48 inches (Optional in rooms where one end of MCPS-built drying rack(s) that measure 44 inches wide and 24 inches deep is accessible, since hooks can be installed on pegboard ends.)

4. On wall opposite or adjacent to teaching wall

a. One 6-foot tall, 12-foot long tackboard with 24-inch tall, 12-inch deep shelving units below

b. Two or three 7-foot tall, 18-inch deep, 36-inch wide shelf sections near kiln area for storage of ceramic work

5. Kiln Area - preferred location is at one end of the storeroom.

a. If in the art room, partition should separate the kiln area from the tackboard and/or chalkboard walls.

b. A kiln exhaust hood and fan (local switch) should be installed. Positive ventilation (using negative pressure) is needed to assure removal of fumes.

c. A drying shelf for greenware and storage shelves for finished ceramic work are needed near the kiln.

d. Kilns are 30 inches wide, 30 inches deep, and 36 inches tall. Allow an additional 6 inches in depth for counterbalance system.

e. Electrical characteristics for the kiln are 208 volt, 30 amps, single phase, 7200 watts. Provide 2-50 amp 250 volt outlet NEMA configuration 6-50R. Provide outlet(s) on wall behind kiln(s).

6. Art Storeroom:

a. The storeroom must have a 6-7 foot wide, 30-inch tall, 34-inch deep work table immediately inside the entrance to the storeroom with built-in shelves below and 14-inch deep wall hung shelving above.

This table will accommodate a 24-inch square paper cutter and storage of large art reproductions and papers below, in 3 banks of shelving units 8 inches on center, 20-inches wide (inside width).

b. One or two 6-foot tall 20-inch wide paper storage shelf section(s), 24 inches deep with shelves 8 inches on center to accommodate 18" x 24" paper.

c. A 47-48" wide roll paper storage rack section should be built to accommodate five rolls of 36 inch wide paper. Poles should be at least 44 inches long and built of strong metal. The diameter of the poles should be no more than 1 inch to fit inside the holes in the paper rolls. In art rooms and storerooms with limited space, the paper roll storage unit is optional, and the architect should consult with the school principal and art teacher to determine if one is needed.

d. Seven-foot tall open shelving, 18 inches deep, should be provided along remaining walls where space permits. Twelve inch deep sections are acceptable for some sections where 18 inch deep shelves won't fit.

e. Kilns may be located in the storeroom with built-in hood above and shelving 12 inches to 18 inches deep on walls adjacent to the kiln area. See notes above for additional kiln information.

MUSIC ROOM

The music room provides specialized space for the activities necessary to develop an understanding of the elements of music. The music room makes instruments, equipment, and other instructional materials accessible.

Spatial Needs

1050 square feet of classroom area which includes a 150 square foot walk-in storage closet

General Design and Location:

1. The music room should be located near the multipurpose room to allow easy access to the stage. The room should be acoustically isolated from the rest of the school.

2. The room should have a clear circular area of at least 20 feet in diameter and access to the music storage room.

3. A secure closet area to store instruments, equipment, choral music, and instructional charts is necessary with access to the music room.

Specific Requirements:

1. This room must be acoustically treated.

2. Variable-sized shelving must allow for storage of books, records, and small instruments.

3. This room needs a child height sink with a work area and drinking fountain.

4. Window blinds and a wall mounted retractable projection screen are required.

5. Approximately 20 feet of chalkboard and 4 feet of tackboard must be provided. Continuous tack strips are needed around the room.

6. Specific storage and shelving specifications are available through Montgomery County Public School's Division of Construction.

7. Eight duplex electrical outlets are to be provided (where feasible, quadplex outlets may be utilized).

DUAL PURPOSE ROOM

This room is to accommodate both art and music activities, but with less sophistication than the laboratories described above.

Spatial Needs

900 square feet classroom; 150 square feet storage

Specific Requirements:

1. A 30-inch high sink is needed with counter space and cabinets above and below.

2. Shelving, tackboard, blackboard, and electrical outlets are needed similar to standard classrooms.

INSTRUMENTAL MUSIC ROOM

This room is used for individual and small-group instruction.

Spatial Needs

400 square feet

General Design and Location:

1. This room is to be near the stage and away from classrooms and the instructional media center.

2. A secure closet area is needed adjacent to the room for large instruments, such as baritones and cellos.

3. Sufficient electrical outlets are to be provided (where feasible quadplex outlets may be utilized).

Specific Requirements:

1. This room must be sound-insulated.

2. A sink for cleaning and an area for repairing instruments are needed.

CORE INSTRUCTIONAL AREAS

INSTRUCTIONAL MEDIA CENTER

Spatial Needs	Square Feet
Main Resource Area	1,800
Materials Preparation/Work/Office Area	500
Media/Textbook Storage	550
Control Room/Storage Head End Equipment Area	250
Head End Equipment Closet	50

General Design and Location:

1. The media center is to be central to the instructional program of the school. However, the center must not become a major traffic artery.

2. The total media complex is to be enclosed and lockable.

3. The location of the media center is to allow for growth into adjoining areas. Surrounding this space with stairwells, corridors, and toilet areas presents future costly expansion problems.

4. The media center is to accommodate multiple rearrangement and use as functions change. It should be acoustically designed for multiple activities. Furniture and shelving on casters for easy moving are to divide one area from another and create traffic patterns.

5. The main resource area is to be subdivided to provide for the following program activities:

   a. Instructional space. This area should not be at an entrance. It should seat 30 students at tables. A projection screen with appropriate floor mounted outlets should be located in this area. Lights in this area should be separate for dimming without affecting the reference area.

   b. Reading and Browsing: This area provides for reading and browsing of newspapers, magazines, fiction, reference collections, and nonfiction materials.

   c. Independent Study: This area allows for individual study desks for students to carry on independent study research projects, analyze information, and solve problems.

   d. Circulation Area: This area needs writing space, book return, computer workstation, file cabinet, and storage. Specific design must be approved by staff in the Division of School Library and Media Programs.

   e. Electronic Catalog Area: This area should be near the circulation desk and will contain 2-4 computers with printer.

   f. Reference Section: This area will contain one or two computers for on-line research activities. It must be located near the electronic catalog area.

   g. Storytelling: This area needs to provide space to seat 30 students on the floor away from busy areas. A projection screen should be accessible.

6. The materials preparation/work/office area is to have the following spaces:

   a. Production: This area provides for the preparation of several types of instructional materials, such as transparencies, slides, and charts. See media center specifications available from the Division of Construction.

   b. Staff Work/Office: The office area must be accessible to the prep area

and main reading room.

7. Storage is to be located adjacent to the materials preparation work area and is to have the following spaces:

   a. Media Center Storage: The space provides for storage of instructional materials, such as seasonal materials, maps and globes, and instructional equipment, such as projectors and previewers, for distribution. Minor repairs, cleaning, and testing of equipment are completed here. Space for manipulatives, especially mathematics and science, is needed.

   b. Textbook Storage: This area provides for storage of textbooks, workbooks, and classroom materials.

   c. Control Room/Storage area will be located adjacent to a support room so that the room can serve the dual function of support space and TV studio.

   d. The CATV Head End Equipment closet is to be located in the media complex.

Specific Requirements:

1. Shelving is to be of metal or wood, adjustable, and interchangeable within standard upright wall units in accordance with MCPS specifications. Particle board is not acceptable. Low shelving is desirable for sight and safety reasons when extra shelving is needed.

2. Shelving is to be allocated on the average as follows:

	Linear Feet
Books	700
Picture Books (with dividers)	150
Magazines (with space for back issues)	20
New book/interest display	10
Media Center Storage (20-24" depth)	as space allows
Textbook Storage (12-18" depth)	as space allows

3. The materials preparation and work area must contain a sink, cabinets, counter spaces of varied heights and sufficient electrical outlets (where feasible quadplex outlets may be utilized).

COMPUTER CENTER

Spatial Needs

950 square feet of effective (net) floor area; 50 square feet total for storage

General Design and Location:

1. The laboratory is to accommodate 30 computers and 7 printers.

2. This room should be located adjacent to the media center.

3. The computer laboratory should be zoned for independent air-conditioning during times when the rest of the building is closed.

Specific Requirements:

1. Specific design guidelines are available through the Division of Construction.

2. Storage space is for software and materials and preferably should include: built-in locking countertop cupboards topped by shelves with locking doors across the front of the room, space for a four-drawer file cabinet, and a small coat closet.

3. The lab should include a wall-mounted screen in front of the room for an overhead projector, a dustless chalkboard, and a modular telephone outlet (RJ11) for use with a modem. If this telephone line is shared with the media center, an LCD (a line-in-use indicator) is needed.

PHYSICAL EDUCATION FACILITY

The physical education facility has two major purposes:

1. To provide an indoor facility for use during school hours

2. To provide for student and community recreation during after school hours, weekends, summers, and possibly holidays

Spatial Needs	Square Feet
Gymnasium	85 x 70
Physical education office	150
Storeroom 8 feet door and ceiling heights; flush threshold	250
Two storage rooms (100 sq. ft. each) 8-foot doors and ceiling heights; flush threshold	200

Outdoor storage 150

General Design and Location:

1. The location is to be near the play areas, directly accessible from a corridor, and easily accessible from the parking lots.

2. Buffering the gymnasium with a corridor or related spaces is required to separate gymnasium noises from the rest of the school.

3. The physical education office should be adjacent to the gymnasium.

4. Architect should refer to detailed requirements provided by Division of Construction in the "Architects Guide".

The following items are required:

Non-breakable window to the gymnasium
Non-breakable window to the lobby for supervision
Toilet and shower facilities
Computer hook-up
Telephone
Venetian blinds for windows
VCR tile
Full size clothing lockers (3)
Electrical outlets

Specific Requirements:

1. A ceiling clearance of 18-20 feet

2. Glazed tile to at least seven feet must cover the walls.

3. A vinly-mesh curtain is to divide the floor area into two equal size spaces. The curtain should lie flat against the wall when open. It may roll to the ceiling for storage.

4. The kinds of activity in the gymnasium require adequate lighting, securely mounted and guarded to prevent damage by balls; keylock switches are required to control gymnasium lights; a minimum of windows to prevent glare and glass breakage is requested.

5. Acoustic treatment of walls and ceiling is required and must be able to withstand damage by balls. Noise from ventilation equipment must be minimal.

6. A wooden flooring should be installed in the gymnasium. Stripping for basketball, volleyball and floor games should be provided. (See diagrams)

7. Graphics should be painted on the gymnasium walls.

8. One of the small storage closets must contain shelves, 6 feet high 18 inches deep, mounted on the two side and back walls. The shelves must be adjustable after installation.

9. The large storage closet must have a length that will accommodate a 16' long balance beam.

10. Separate toilet rooms for boys and girls located in the lobby.

11. An electric water cooler and public telephone located near the lobby area.

12. Six feet of tackboard installed in the lobby area.

13. The window between the lobby and physical education office must be low enough to view people in the lobby.

14. A control gate to separate the gymnasium from the school during after-hours.

15. Separate heating source or controls to permit use when the balance of the building is not occupied.

16. Recessed door handles.

17. Doorway center post removable for passage of equipment.

18. A recessed fire alarm box or covered fire alarm box, preferably in a corner of the room.

19. A call button to the main office must be located in the gymnasium or just inside the physical education office if the office opens into the gymnasium.

20. A clock with a wire covering located on a side wall of the gymnasium. If the gymnasium has a divider curtain, a clock should be provided on both ends of the room.

21. Fire extinguisher, if mounted in the gymnasium, should be recessed into the wall.

22. Wall safety padding must be mounted under each basketball backstop. Doors or openings should not be directly behind basketball backstops.

16 feet under end basketball backstops
12 feet under side basketball backstops

23. Basketball backstop, adjustable from 8 feet to 10 feet, must be mounted four feet from the side walls to provide two equal sized side courts. The backstops must be of aluminum or fiberglass composition. Collapsible rims must be provided.

24. A basketball backstop, adjustable from 8 feet to 10 feet, must be mounted on each end wall for full court play. The backstops must be of aluminum or fiberglass composition. Collapsible rims must be provided.

25. A hand crank must be provided for the ajustable basketball backstops if they are not operated electrically.

26. Four climbing ropes (1 knotted, 3 plain) with hoist and safety cables located away from ceiling lights and basketball backstops.

27. One 8 foot semi-guyed (wall mounted) horizontal bar with safety chain and floor plates.

28. Two pair of game standards with floor plates installed at various locations–ends, middle, sides of floor.

29. Two portable game standards.

30. Chin up bar, wall mounted.

MULTIPURPOSE ROOM AND STAGE FOR SCHOOL WITH GYMNASIUM

Spatial Needs	Square Feet
Circulation Area	3,000
Stage	450
Two storage rooms (150 sq. ft. each)	300

General Design and Location

1. The multipurpose room is to have a ceiling height of approximately 12 feet.

2. Table storage and chair storage must be located adjacent to the multipurpose room.

3. Exits from the multipurpose room must be sufficient to allow maximum seating.

4. Toilet rooms and an electric water cooler should be near the multipurpose room to allow public use.

5. Audiences need to be able to hear and see presentations from all locations in the room. Ventilation equipment noise must not inhibit use of the space for auditorium purposes. Acoustical treatment is needed.

6. The stage is to have a proscenium opening 24 feet wide. The depth is to be 15 feet deep. The stage floor is to be three risers above the multipurpose room floor. A full set of stage curtains are to be provided. An 8'x10' motorized projection screen is to be provided.

7. Proper lighting and sound amplification are required.

8. The stage is to be accessible to the physically handicapped.

9. Lighting, windows, fire alarm box, clock and ceiling must be protected to prevent damage by balls.

10. Outdoor play areas should be accessible from multipurpose room; children should not have to cross driveways or parking lots.

11. A building service closet is to be located within close proximity of multipurpose room.

12. An audio loop system is to be provided for hearing impaired students; guidelines are available through the Division of Construction.

13. An independent sound system will be provided in the multipurpose room.

14. A call button to the main office is to be provided.

MULTIPURPOSE ROOM AND STAGE FOR 740 SCHOOL WITHOUT GYMNASIUM

Spatial Needs	Square Feet
Circulation Area exclusive of the stage	3,600
Stage	450
Four storage rooms	
2 - for chairs and table	300
1 - for physical education equipment (with 8 ft. doors; no threshold, 8 ft. ceiling clearance)	250
1- for physical education supplies (with 8 ft. door; no threshold, 8 foot ceiling clearance)	100

General Design and Location

1. The multipurpose room is to have a ceiling height of approximately 16 feet.

2. Storage closets must be located adjacent to the multipurpose room.

3. Exits from the multipurpose room must be sufficient to allow maximum seating.

4. Multipurpose room should have access to fields and play area without students crossing parking lots and driveways.

5. Toilet rooms and an electric water cooler should be near the multipurpose room to allow public use. A control gate should separate this room from the rest of the building.

6. Audiences need to be able to hear and see presentations from all locations in the room. Ventilation equipment noise must not inhibit use of the space for auditorium purposes. Acoustical treatment is needed.

7. The stage is to have a proscenium opening 24 feet wide and 15 feet deep. The stage floor is to be 24 inches above the multipurpose room floor.

8. Proper lighting and sound amplification are required.

9. The stage is to be accessible to the physically handicapped.

10. Lighting, windows, fire alarm box and ceiling must be protected to prevent damage by balls.

11. A call button to the main office must be located in the multipurpose room.

12. The small storage closet must contain shelves, 6 feet high 18 inches deep, mounted on the two side and back walls. The shelves must be adjustable after installation.

13. The large storage closet must have a length that will accommodate a 16 foot long balance beam.

14. All door handles should be recessed.

15. Doorway center posts should be removable for passage of equipment.

16. Two basketball backstops, side fold, adjustable from 8 feet to 10 feet, must be mounted four feet from the side walls. Collapsible rims must be provided. The backstops must be aluminum or fiberglass construction.

17. A hand crank must be provided for the adjustable basketball backstop if they are not operated electrically.

18. Twelve feet of wall safety padding must be mounted under each basket. Doors or openings should not be directly behind basketball backstops.

19. Four climbing ropes (1 knotted, 3 plain) with hoist and safety cables located away from ceiling lights and backetball backstops.

20. One 8 foot semi-guyed (wall mounted) horizontal bar with safety chain and floor plates.

21. Two pair of game standards with floor plates installed at various locations–ends, middle, sides of floor.

22. Two portable game standards.

23. Chin up bar, wall mounted.

24. Six feet of tack board installed outside the main doorway.

25. Stripping for volleyball, basketball, and floor games (see diagrams)

26. Stripping for hop scotch, four square or other floor games should not be placed in front of doorways.

27. A clock with a wire covering.

ADMINISTRATIVE AND SERVICE AREAS

ADMINISTRATIVE SUITE

Spatial Needs	Square Feet
General Office	500
Workroom	350
Principal's Office	250
Assistant Principal's Office	150
Conference Room	300
Health Suite	450
Telephone Room	50
Storage Room	100
Records room	100

General Design and Location:

1. The administrative suite must be located with good access from the main entrance of the school.

2. The suite must be a natural first stop for visitors to the school and must, therefore, have direct corridor access.

3. Spaces need to be arranged for student and visitor flow and for efficient use by office staff.

4. The general office is to be treated as the center of the administrative suite with direct access to the principal's office, the workroom, and the health suite. A coat closet is to be provided for office staff and visitors.

5. The health suite walls and floors are to be of easily cleanable material, and floors throughout are to be of noise reducing construction. Traffic is to be kept close to the door, cross traffic is to be minimized, and supervision from the general office is to be possible.

6. Sufficient electrical outlets are to be provided (where feasible, quadplex outlets may be utilized).

Specific Requirements:

1. The general office is to have:

   a. a staff bulletin board

   b. a coat closet

   c. Sufficient staff mailboxes provided in a manner that assures security and privacy, e.g., out of view from persons entering the general office (Location in the workroom may be considered.) The location of mailboxes should not create congestion by impeding the smooth flow of traffic in the general office and hallways.

   d. a small room where a teacher can talk privately on the telephone (The room needs a door with window, or a "phone in use" light.)

2. The workroom is to be:

   a. equipped, along one wall and one end, with cabinetry appropriate for storing a variety of office and school supplies. A portion of countertop is to be more than 30 inch wide to accommodate a large

paper cutter.

b. adequate for a large copying machine with necessary electric service and ventilation

c. equipped with a sink

d. directly accessible to a corridor

e. treated acoustically to keep machine and work noises at low levels

3. The principal's office is to be:

a. equipped with a tackboard and two-shelf adjustable bookcases under windows. Each shelf must be able to hold a 12 inch notebook upright

b. adjacent to a toilet room and sink

c. directly accessible to the conference room through a connecting door

d. Have good visible access to bus drop

4. The health suite includes a waiting area; a treatment and storage area; a resting area, including a privacy room; and a toilet room containing a sink and mirror. It should be equipped as follows:

a. The waiting area is to have space for four to eight chairs.

b. The treatment area is to have a kitchen-type sink with cabinets above and below (including a locked medicine cabinet), a 36-inch high countertop, and a full sized refrigerator.

c. The storage area is to have space sufficient for a four-drawer locked file cabinet, a wardrobe for coats, and a wheelchair.

d. The rest area needs space for two to four cots, privacy curtains, and one bedside cabinet. In addition, there is to be a separate privacy room within the rest area, with a door and space for a cot and a single pedestal desk and chair. In the rest area and privacy room, supplementary power ventilation capable of 20 changes per hour is to be provided, with control by means of a separate switch within the health suite. Ventilation is important throughout the health suite. A window is preferred.

5. The conference room is to have a chalkboard, a tackboard, and one

bookcase.

6. The assistant principal's office is to be equipped similarly to the principal's office.

COUNSELORS OFFICE

Spatial Needs

250 square feet

General Design and Location:

The counselors office is to be easily accessible from the classrooms and near, but not a part of, the administrative suite.

Specific Requirements:

This office needs a chalkboard, tackboard, closet, telephone, and bookshelves.

FOOD SERVICE KITCHEN

Spatial Needs

1000 square feet

General Design and Location:

1. The kitchen is to be operated as a "finishing kitchen" and is to include an area for dry storage, a manager's work station, toilet facilities, preparation and serving area, and a receiving area for daily deliveries. A sheltered dock is preferred and should be separate from other school receiving. Delivery flow-path must be clear of preparation area.

2. Air conditioning must be available at all times in elementary kitchens.

3. Code requirements for lighting, surfaces, and equipment must be met.

4. Windows and doors must have screens.

5. An easy to mop, slip-resistant floor is required.

6. There should be direct access to both the hallway and the multipurpose room to facilitate one-way circulation through the serving line.

Specific Requirements:

1. Serving Area - 200 square feet

   26 ft. line with 3 ft. clearance at each end. Single door refrigerator and microwave oven on cart adjacent to area. Wall clock and tackboard on serving line wall. Add milk cooler in dining room in large schools.

2. Walk-in Cooler/Freezer - 140 square feet 7' 9" x 8' 8 1/2" cooler; 7' 9" x 8' 8 1/2" freezer; height 7' 6"; mobile stainless shelving and dunnage; roof top compressor.

3. Dry Storage - 120 square feet

   Mobile chrome shelving and dunnage. Adequate ceiling height for top shelf storage. Totally secure and free of roof access ladders or electrical panels.

4. Manager Work Area 30 square feet

   Visibility to delivery and serving area. Locate away or protect from outside door draft. Desk (NIC), file (NIC), telephone, tackboard.

5. Toilet Room - 40 square feet

   Hand sink with soap and towel dispenser, sanitary napkin disposal, 3 coat lockers.

6. Preparation Area - 470 square feet

- Double convection oven with roll-in bottom
- Oven carts and dollies (2 each)
- Half-size range
- Work tables; 6 ft. and 8 ft.; 2 drawers each, undershelf.
- Buckhorn baskets (200 each) and dollies (20 each)
- Hand sink with pedals, soap and towel dispensers
- Three compartment sink; 28 long x 24 depth with 24 inch drainboards.
  Disposal in drainboard with pre-rinse spray.
  6 feet louvered shelf above with hooks.

STAFF ROOMS

Spatial Needs	Square Feet
Staff Lounge	700

General Design and Location:

1. Two toilets with corridor access, are required for the staff room.

Specific Requirements

1. The staff lounge should contain a pullman kitchen with a microwave. Six linear feet of counter space should be provided.

2. The staff room is a place for staff members to relax, study, plan, and think together. Carpeting is required, and other acoustic treatment should be considered. A clock should be provided.

3. A small enclosed area is needed for a telephone.

4. Ventilation must be provided. An operable window in the staff room is required.

BUILDING SERVICES OFFICE

Spatial Needs

300 square feet

1. A locker room and shower for the staff are to be provided.

2. A desk, chair, bulletin board, filing cabinet, and phone access to the main office are required.

3. Some general storage is to be adjacent.

COMPACTOR/TRASH ROOM

Spatial Needs

150 square feet

1. The compactor/trash room is to be completely separate from the kitchen spaces and reasonably shielded from normal view.

2. Trash trucks must have access to the room.

3. The room is to be heated and have adequate interior lighting, floor drainage, and easily cleanable surfaces.

4. Hot and cold water are to be available for flushing and cleaning.

5. The room is to be bug-free and well ventilated.

STORAGE FACILITIES

Spatial Needs

900 square feet; 150 square feet of which is for outdoor storage

1. Three or more storage spaces are to be distributed throughout the school.

2. Flexible shelving floor to ceiling is to accommodate books, teaching aids, large size (24" x 36") paper, and other instructional supplies.

3. Good lighting and easy access to materials being stored are required.

4. Electrical outlets and ventilation must be provided in all large storage rooms.

5. Small building services storage closets are to be strategically located throughout the building.

SITE REQUIREMENTS

Play areas: Two softball fields, 250' radius, with a regulation (195' x 330') soccer field superimposed

Two paved areas, 80' x 100'.
Two areas 100' x 60' minimum or one area 120' x 100' minimum, level bare ground, unseeded and unsodded, adjacent to the large paved areas, for play equipment. This area will be boxed and mulched by the school system.
Two adjacent kindergarten play areas. One area 40'x 60' paved, and one area 40' x 50' bare ground unseeded and unsodded for play equipment.

One Head Start play area similar to the kindergarten space.

Driveway: 24' wide, 50' radius for turnaround

Parking: 85 cars initially, future expansion possible

Service drive: 15' wide with adequate turnaround

Play Areas

1. The paved play areas must be as level as possible but still provide positive drainage.

2. The kindergarten play area is to be adjacent to and accessible from the kindergarten rooms and enclosed with a vinyl-coated fence.

3. The Head Start play area is to be adjacent to and accessible from the Head Start room and have a vinyl-coated fence.

4. The kindergarten and Head Start play areas should be accessible by vehicles.

5. There must be level unseeded and unsodded play areas for children's play equipment. The playground equipment will be boxed and mulched by the school system.

6. Care must be taken to assure that metal grates for drainage, if provided, are not hazards for these play areas.

7. Two softball backstops, one pair of soccer goals, and six outdoor basketball

goals (at a height of 10 feet) with poles and backstops are to be provided.

8. Play equipment must be installed 8 feet from walls, walks, paved areas, and other equipment.

9. Equipment should not be located at the bottom of a hill or slope.

10. A paved walkway should be provided between the building and paved play areas.

11. Shrubs, trees and other landscaping should not interfere with play areas.

Driveways

1. A driveway for buses, with a separate entrance and exit or a turnaround, is required. Bus traffic is to be separated from car traffic at all times if at all possible. Bus loading zones should be able to accommodate 100 percentage of the student body.

2. A service drive is needed to service the kitchen, boiler room, and general delivery area.

3. Where necessary, oil filler pipes, with adequate overflow pipes, are to be easily accessible for a tractor-trailer.

4. All driveways must be arranged so that children do not cross them to get to the play areas. Access to the Head Start and future day care areas must be considered.

5. Pedestrian access to the school facilities should be designed to make the best use of community right-of-ways and should not require students to cross in loading-zone areas.

6. Driveway aprons are to be perpendicular to the center line of the street; and if there is an intersecting street on the opposite side from the proposed driveways, the driveway apron is to line up with the intersecting street.

7. The grade of the driveways shall not exceed eight percent and should provide for a minimum centerline radius of 50 feet to provide adequate turning space for buses.

Landscaping

1. Planting is to include screen planting and that needed for erosion control.

2. Existing plant stock, if on site, is to be evaluated for use and protected accordingly.

3. Landscaping to support energy conservation and to relate the building to the site with aesthetic appeal must be included.

4. Planting areas along sidewalks and wooded and flowered areas are to be situated to enable the physical education program to be carried on without undue disturbance to the classrooms.

5. Provision for outdoor watering must be included.

6. The landscaping plan should include areas for outdoor environmental education programs.

640 Addendum

When using the 740 shell for a 640 school, make the following changes:

1. Dual Purpose Room - Remove

2. Instrumental Music Room - Remove

3. Media Center - Make these changes:

   1,800 - Resource/Circulation
   350 - Materials Preparation
   450 - Media Storage

4. Physical Education - make this change:

   3,700 - Gymnasium (74 x 50)

5. Multipurpose Room/Kitchen - make these changes:

   2,400 - Multipurpose Room
   150 - Chair Storage
   150 Table Storage

6. If a gymnasium is not provided, add the following into the Multipurpose Room section:

   300 - Physical Education Storage (2 at 150 sq. ft. each)

7. Administration - make these changes:

   375 - General Office
   300 - Workroom
   400 - Health Room
   Remove assistant principal office

8. Provide parking spaces for 70 cars

9. General Storage - 750 - (3 storage at 250 sq. ft. each)
   (plus 100 shown under administration)
   150 - Outdoor storage
   900